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10/659,089	09/10/2003	Anthony S. Salemi	MEG-P-03-001	2725

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EXAMINER	
CORDRAY, DENNIS R	
ART UNIT	**PAPER NUMBER**
1731	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/08/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/659,089	SALEMI ET AL.	
	Examiner	Art Unit	
	Dennis Cordray	1731	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 October 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14,20,21 and 23-29* is/are rejected.

7)☒ Claim(s) *15-19 and 22* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 October 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's amendments filed 10/16/2006, have overcome the rejection(s) of claim(s) 1-29 under 35 U.S.C. 112. Therefore, the rejection has been withdrawn.

Applicant's amendments filed 10/16/2006, have overcome the rejection(s) of claim(s) 1-29 under 35 U.S.C. 102(b) and 35 U.S.C. 103(a). The cited references do not teach or suggest the use of silver zeolite in the antimicrobial layer or the basis weight of the base sheet, as recited in the amended independent claims.

The amendments have resulted in new ground(s) of rejection as detailed below.

The remaining arguments with respect to the rejections are moot.

Drawings

2. The drawings were received on 10/16/2006. These drawings are accepted.

Specification/ Claim Objections

3. The amendments to the Specification and Claims have overcome the objections.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-11 and 29 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1 recites the newly added limitation that "the antimicrobial surface is made of silver zeolite." The original Specification only discloses that the antimicrobial layer may contain silver zeolite (p 16, top paragraph spanning from previous page), but not an antimicrobial surface made of silver zeolite. The claim will be interpreted for the purpose of this examination to mean that the antimicrobial layer contains silver zeolite.

Claims 2-11 depend from and carry all of the limitations of Claim 1, thus also fail to comply with the written description requirement.

Claim 29 recites the newly added limitation that the separated from an object on the antimicrobial surface is located on the top surface of the sheet. The original Specification only discloses that the liquid is associated with the indented texture of the sheet (p 8, 6th par) or that the paper channels liquids off of the indented antimicrobial paper to prevent liquid pooling and/or slippage caused from liquid pooling (p 9, 6th par). P 17, 3rd par states, "Moreover, the high points 6 and the low points 8 may force liquids into the channels 7 and/or move the liquids through the channels 7 from the indented antimicrobial paper 10 onto the surface." Nowhere is it stated that the separated liquid is located on the top surface of the sheet.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 13 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites "an indentation" formed in "continuous rows along the sheet." It is not clear how the indentation, used in the singular, is formed in continuous rows. For instance, is the indentation formed by making a series of rows connected at the ends to create a single indentation?

Claim 24 recites forming an indentation that is spaced uniformly across the sheet. It is not clear how a single indentation can be spaced uniformly across the sheet.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Radwanski et al (US 20020006887).

Radwanski et al discloses an antimicrobial containing wipe comprising a substrate layer to which an antimicrobial agent is adhered and one or more laminate layers (Abs). The antimicrobial agent is a silver-zeolite complex (p 4, par 42). The

antimicrobial agent is encapsulated in a polymer, such as polyethylene, to control its release rate (p 5, pars 49-50). The antimicrobial agent is generally added to the substrate layer while the layer is unsolidified, and becomes part of the fibrous web of the substrate layer (p 4, par 40). In one embodiment, the substrate layer is adhered (connected) to a laminate layer (p 3, pars 31-32). The disclosed structure is substantially identical to the claimed structure where the disclosed substrate layer corresponds to the antimicrobial layer and the laminate layer corresponds to the base layer. Radwanski et al discloses that the laminate layer has a basis weight of at least 20 g/m^2 (12.2 lb /3000 sq ft ream) and, in one embodiment, is 49 g/m^2 (30 lb /3000 sq ft ream) (p 3, par 30). Both values overlap the claimed range.

Although the disclosure exemplifies the embodiment wherein a poly(ethylene vinyl acetate) or polyethylene with calcium hypochlorite is the antimicrobial agent (p 5, par 50; p 6, par 58), silver-zeolite is also disclosed in one embodiment as being a suitable antimicrobial agent (p 4, par 42). A preferred substrate layer is made from a hydrophobic fibrous material, such as polyethylene (p 3, par 32; Claims 7-8). Thus, in some embodiments the antimicrobial layer is made of polyethylene having silver zeolite.

Radwanski et al discloses a method for making the wipe comprising providing a sheet of laminate material having a basis weight of 49 g/m^2 (30 lb /3000 sq ft ream) on a foraminous forming wire (substantially flat and forms a plane) and laminating to it the substrate layer containing the antimicrobial material (p 6, par 58).

7. Claims 1,4,7,11-12,14 and 20-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Foss et al (6723428).

Foss et al discloses an antimicrobial fiber and multilayered fibrous products made therefrom (Abs). The fibers are bicomponent fibers having a thermoplastic core and a thermoplastic sheath containing an antimicrobial agent. A preferred composition is polyethylene containing silver-zeolite particles (col 21, lines 10-22 and 37-40). In another embodiment, a monocomponent fiber of polyethylene containing silver-zeolite is used (col 23, lines 12-26). Thus the antimicrobial layer is made of polyethylene having silver-zeolite.

In one embodiment, the product is in sheet form (a paper), usable in flat (or planar) form on countertops (col 38, lines 36-49). The sheet can be multilayered (two, three and four layered sheets are shown in Figures 16-18), with an antimicrobial layer on one or both sides (col 38, lines 43-46). The surfaces can be hydrolysis resistant (a form of water-resistant layer). (col 39, lines 15-17). Thus, in some embodiments, the sheet has an antimicrobial layer on one surface and a water resistant layer on the opposite side, with thicker support layer(s) between them (col 39, line 56-65; col 40, lines 4-10 and 51-53). The layers are connected to each other by means known in the art (col 40, lines 13-20).

The layers of the sheet can be coextruded so that the layers are bonded together immediately after extrusion, or they can be connected by other means known in the art (col 40, lines 13-20). Thus, the process comprises providing a sheet or first layer, which inherently has two sides, and connecting other layers to the sheet or first layer, wherein the other layers can be antimicrobial or water resistant layers.

The sheets can be molded into a tray to contain food packaged therein (col 40, lines 59-66), thus use of the material to contain and enclose food is contemplated. Alternatively, the sheets can be flexible (col 17, lines 13-17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lindsay et al (6610173) in view of Hansen et al (5789326) and Radwanski et al.

Lindsay et al discloses a three-dimensional paper web usable in absorbent tissue products having a pattern of protrusions (plurality of indentations or depressions) that extend outside the plane of the paper (Abs; col 1, lines 6-18; ref # 68 in Figs 2A, 2B, 3A, 3B; col 11, lines 44-48; col 12, lines 43-45). The web can be made into sheets and stacked in planar form (thus the base forms a plane), thus can have a defined length and width (col 31, lines 47-50). The web has opposing outer surfaces (i.e.-a top side and a bottom side) (col 31, lines 16-38). In an embodiment, the base paper is laminated with additional plies of tissue (paper layers), spunbound or meltblown webs wherein a pair of plies comprise hydrophobic matter (water resistant layer) and/or antimicrobial additives (col 31, lines 19-31), thus the various embodiments include a) one surface ply (i.e.-bottom surface of the base layer) having a water resistant layer and the opposite surface ply (top surface) an antimicrobial layer, b) one or more paper

layers sandwiched between the outer layers or between the top antimicrobial layer and the base paper, c) one or more plies comprising hydrophobic matter (water resistant layers) and/or paper layers sandwiched between the base layer and the antimicrobial layer. The order of the layers is not specified, thus the embodiments include any arrangement of paper and water resistant layers. Note that a paper layer containing hydrophobic matter is interpreted to be a water resistant layer. Lamination of additional layers can be achieved through crimping or perf-embossing (each of which would form one or more indentations or scores in the layers that can be uniform across and continuous along the sheet) (col 31, lines 34-36). Lamination can also be achieved through adhesive attachment (adhering layers together). Thus the layers are connected to one another.

Figures 9A, 9B and 10 show that the pattern of depressions is continuous from side to side across the web (col 19, lines 1-64, especially lines 14-16, 43-46 and 55-62). The indentations in the web are made between the raised elements 60 of the deflection member 36. Lindsay et al discloses that the method of forming the depressions is repeating (col 19, lines 14-17, Figs 2A and B, 9B and 12), and is continuous in the machine direction of the web, thus the pattern of depressions is continuous over the length and width of the web. The web can also be divided into a plurality of sheets (col 33, lines 20-25).

Figures 4-8, 9B and 12 show cross sections of the deflection members that form the depressions in the web, and depict a uniform spacing between deflection members, thus the formed sheet has depressions uniformly spaced across the length and width of

the base. Figure 10 shows a configuration wherein the deflection members form depressions that are continuous rows across the web.

An example is given of a base sheet having a basis weight of 40 g/m^2 (24.6 lb/3000 sq. ft. ream), which lies within the claimed range (col 44, lines 56-62).

Lindsay et al does not disclose that the antimicrobial material is a silver zeolite.

Hansen et al discloses that zeolites with silver salts are known to be used as antimicrobial agents in absorbent tissue products (col 1, lines 17-32; col 9, lines 9-14). As discussed in the above rejection of Claims 1 and 12, Radwanski et al discloses silver zeolites as antimicrobial agents in wipes, an alternate use for tissue products.

The art of Lindsay et al, Hansen et al, Radwanski et al and the instant invention is analogous as pertaining to absorbent paper products containing antimicrobial agents. Since Lindsay et al does not specify an antimicrobial agent, it would have been obvious to one of ordinary skill in the art to use a silver zeolite as an antimicrobial agent in the paper of Lindsay et al in view of Hansen et al and Radwanski et al as an agent known in the art.

9. Claims 13, 23-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foss et al in view of Weder (5921062).

He disclosure of Foss et al is detailed in the rejection of Claims 1,4,7,11-12,14 and 20-21 above. Foss et al does not disclose shredding the sheet, forming an indentation spaced uniformly across the sheet or dividing the sheet into multiple sheets. Foss et al further does not disclose using a sheet having a weight range from 16.5 to 90

pounds to protect an object against contamination, or of wrapping the sheet around an object.

Weder discloses a packaging sheet having an antimicrobial agent (Abs). The sheet comprises a base sheet with portions thereof that permit selective control of the atmosphere to which the contents are exposed and an antimicrobial agent disposed thereon (surface antimicrobial layer) (col 4, lines 45-54; col 7, lines 46-47). The sheet has an upper and a lower surface and may comprise multiple layers connected together or adhered together by bonding material (col 4, lines 64-66; col 5, lines 26-32; col 6, lines 22-23). The sheet can comprise thermoplastic or paper layers (col 7, lines 14-24). The antimicrobial material layer can be applied by spraying, brushing, immersion, or in a label, sticker or decal applied to the sheet (col 8, lines 55 to col 9, line 9). The antimicrobial layer can be a second sheet of material connected to the base sheet (col 9, line 55-58). Weder discloses that a plurality of sheets can be connected linearly and rolled. Preferably the plurality of sheets are connected by perforations (Fig 5) such that they may be separated from the roll (col 10, lines 13-22), thus dividing the sheet into a plurality of sheets. Figure 5 shows a row of perforations (indentations) spaced uniformly across the sheet. The sheet can be shredded into small pieces for decorative purposes (col 7, lines 8-11; col 11, lines 39-46, Fig 11).

Weder discloses a method of using the sheet to protect an object (cols 12-14 and 18-19; Claims 1-4) by wrapping the sheet around the object (Figures 12-15 and 16-19) or to completely enclose an object (Figures 29-30 and 32-33). The sheet, shown with a perimeter larger than the object to be wrapped, is placed on and covers a flat surface

(Figs 12, 16 and 29). The object is placed on the sheet within the perimeter of the sheet and the sheet separates the object from the surface. The sheet is wrapped around the object (Figs 13-14,17-19) or the object is completely enclosed (Figs 29, 30, 32 and 33) in the sheet. The object is thus protected by the antimicrobial surface (Claims 1-4).

Although Weder does not expressly disclose that the object is placed on the antimicrobial surface, it would have been obvious to one of ordinary skill in the art to do so to take full advantage of the antimicrobial properties of the sheet.

The art of Foss et al, Weder and the instant invention is analogous as pertaining to antimicrobial paper and the use thereof. Both Foss et al and Weder disclose the use of the antimicrobial paper to enclose and protect food. It would have been obvious to one of ordinary skill in the art to protect food or another object by wrapping or enclosing it with the flexible sheet of Foss et al using the method of Weder as a known and functionally equivalent option. The instant Claims recite a broad range of weight for the antimicrobial paper. Since the instant Disclosure recites no particular inventive advantage for using paper of the claimed weight, but merely recites "a weight range between, for example, 16.5 pounds and 90.00 pounds" (p 16, lines 1-2), it would have been obvious to one of ordinary skill in the art to use a paper of any weight, including the claimed range, as a functionally equivalent option and have a reasonable expectation of success. It would also have been obvious to shred the paper and use the shreds in a decorative manner as a known use for such papers to minimize fungal and bacterial growth on the decorations.

Allowable Subject Matter

10. Claims 15-19 and 22 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 29 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the nearest prior art discloses generally the method of making a multilayer paper but does not disclose the specific step of scoring the water resistant layer and there is no suggestion that would lead one of ordinary skill in the art to score a water resistant layer. The process of making a laminated paper having a layer made of polyethylene containing silver zeolite on one surface and multiple paper or water resistant layers between the polyethylene containing layer and the base layer is also not found or suggested in prior art. There is similarly no disclosure or suggestion to separate a liquid from the object on the antimicrobial surface where the liquid is located on the top surface of the sheet.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DRC

ERIC HUG
PRIMARY EXAMINER